CLAIMS:

- 1. A hollow fiber membrane for blood purification having a integrally continuous structure from the inner membrane surface to the outer membrane surface, the membrane comprising a hydrophobic polymer and a hydrophilic polymer, and exhibiting a zeta potential on the inner surface thereof of greater than -3.0 mV but less than 0 mV at pH 7.5, when measured using a sample with an embedded resin on the outer side for allowing the electrolyte solution to flow through only the inside of the hollow fiber, and using a 0.001 mol/l potassium chloride aqueous solution as an electrolyte solution.
- 2. The hollow fiber membrane for blood purification according to claim 1, having:
- (a) a polyvinylpyrrolidone sieving coefficient of 45% or more in a filtration test using a polyvinylpyrrolidone aqueous solution with a weight average molecular weight of 40,000,
- (b) an albumin sieving coefficient of 0.6% or less in a filtration test using bovine serum,
 - (c) a protein adsorption amount of 65 mg/m² or less,
 - (d) breaking strength of 60 kg/cm² or more, and
 - (e) breaking elongation of 60% or more.
- 3. The hollow fiber membrane for blood purification according to claim 1 or 2, wherein the hydrophobic polymer is a polysulfone-based resin.
- 4. The hollow fiber membrane for blood purification according to any of claims 1 to 3, wherein the hydrophilic polymer is polyvinylpyrrolidone.

- 5. The hollow fiber membrane for blood purification according to claim 4, further having: (f) the polyvinylpyrrolidone concentration in the hollow fiber membrane of 3.0 to 5.0 wt%.
- 6. The hollow fiber membrane for blood purification according to claims 1 to 4, further having an overall mass transfer coefficient of phosphorus of 0.040 cm/min or greater.
- 7. The hollow fiber membrane for blood purification according to any one of claims 1 to 6, further having: (g) the thickness of the dense layer of 1 to 5 μ m.
- 8. A blood purification apparatus comprising the hollow fiber membrane according to any of claims 1 to 7 installed in a cylindrical container having two nozzles for flowing a dialysate, the container having both ends fabricated with a potting material for separating the hollow inside of the membrane from the outside by a membrane wall and the container further having a header cap for flowing blood fitted on both ends.
- 9. The blood purification apparatus according to claim 8, wherein the hollow fiber membrane has the phosphorus clearance per membrane area of 1.5 m² of 180 ml/min or more.